# JAVA INTERNSHIP

# TASK-2

# HOSPITAL MANAGEMENT SYSTEM

## APPOINTMENTSERVLET.JAVA

```java
package hms;

import javax.servlet.*;
import javax.servlet.http.*;
import java.io.IOException;
import java.sql.*;

public class AppointmentServlet extends HttpServlet {
    protected void doPost(HttpServletRequest request, HttpServletResponse response)
            throws ServletException, IOException {
        String patientId = request.getParameter("patientId");
        String doctor = request.getParameter("doctor");
        String date = request.getParameter("date");
        String time = request.getParameter("time");

        try {
            Class.forName("com.mysql.cj.jdbc.Driver");
```

```java
        Connection conn =
DriverManager.getConnection("jdbc:mysql://localhost:
3306/hms", "root", "root");

        PreparedStatement ps =
conn.prepareStatement("INSERT INTO
appointments(patient_id, doctor, date, time) VALUES
(?, ?, ?, ?)");

        ps.setString(1, patientId);

        ps.setString(2, doctor);

        ps.setString(3, date);

        ps.setString(4, time);

        ps.executeUpdate();

        conn.close();

    } catch (Exception e) {

        e.printStackTrace();

    }

    response.sendRedirect("appointment.html");

  }
}
```

# APPOINTMENT.HTML

```html
<!DOCTYPE html>
<html>
<head><title>Schedule Appointment</title>
<link rel="stylesheet" type="text/css" href="style.css">
</head>

<body>
<nav>
<a href="registration.html"><button>Registration</button></a>
<a href="appointment.html"><button>Appointment</button></a>
<a href="ehr.html"><button>EHR</button></a>
<a href="billing.html"><button>Billing</button></a>
<a href="inventory.html"><button>Inventory</button></a>
<a href="staff.html"><button>Staff</button></a>
</nav>
```

```html
<h2>Appointment</h2>
<form action="scheduleAppointment" method="post">
    Patient ID: <input type="text" name="patientId"><br>
    Doctor Name: <input type="text" name="doctor"><br>
    Date: <input type="date" name="date"><br>
    Time: <input type="time" name="time"><br>
<input type="submit" value="Schedule">
</form>
</body>
</html>
```

## BILLINGSERVLET.JAVA

```java
package hms;

import javax.servlet.*;
import javax.servlet.http.*;
import java.io.IOException;
import java.sql.*;
```

```java
public class BillingServlet extends HttpServlet {

    protected void doPost(HttpServletRequest request,
HttpServletResponse response)
            throws ServletException, IOException {

        String patientId =
request.getParameter("patientId");

        String amount = request.getParameter("amount");

        String service = request.getParameter("service");


        try {

            Class.forName("com.mysql.cj.jdbc.Driver");

            Connection conn =
DriverManager.getConnection("jdbc:mysql://localhost:
3306/hms", "root", "root");

            PreparedStatement ps =
conn.prepareStatement("INSERT INTO
billing(patient_id, service, amount) VALUES (?, ?, ?)");

            ps.setString(1, patientId);

            ps.setString(2, service);

            ps.setString(3, amount);

            ps.executeUpdate();
```

```java
                conn.close();

        } catch (Exception e) {

            e.printStackTrace();

        }

        response.sendRedirect("billing.html");

    }

}
```

## BILLING.HTML

```html
<!DOCTYPE html>

<html>

<head><title>Billing</title>

<link rel="stylesheet" type="text/css" href="style.css">

</head>

<body>

<nav>

<a href="registration.html"><button>Registration</button></a>
```

```html
<a href="appointment.html"><button>Appointment</button></a>
<a href="ehr.html"><button>EHR</button></a>
<a href="billing.html"><button>Billing</button></a>
<a href="inventory.html"><button>Inventory</button></a>
<a href="staff.html"><button>Staff</button></a>
</nav>

<h2>Generate Bill</h2>
<form action="billing" method="post">
    Patient ID: <input type="text" name="patientId"><br>
    Service: <input type="text" name="service"><br>
    Amount: <input type="text" name="amount"><br>
<input type="submit" value="Submit">
</form>
</body>
</html>
```

## EHRSERVLET.JAVA

```java
package hms;

import javax.servlet.*;
import javax.servlet.http.*;
import java.io.IOException;
import java.sql.*;

public class EHRServlet extends HttpServlet {
    protected void doPost(HttpServletRequest request, HttpServletResponse response)
            throws ServletException, IOException {
        String patientId = request.getParameter("patientId");
        String diagnosis = request.getParameter("diagnosis");
        String treatment = request.getParameter("treatment");

        try {
            Class.forName("com.mysql.cj.jdbc.Driver");
```

```java
        Connection conn =
DriverManager.getConnection("jdbc:mysql://localhost:
3306/hms", "root", "root");

        PreparedStatement ps =
conn.prepareStatement("INSERT INTO ehr(patient_id,
diagnosis, treatment) VALUES (?, ?, ?)");

        ps.setString(1, patientId);

        ps.setString(2, diagnosis);

        ps.setString(3, treatment);

        ps.executeUpdate();

        conn.close();

    } catch (Exception e) {

        e.printStackTrace();

    }

    response.sendRedirect("ehr.html");

  }
}
```

## EHR.HTML

```html
<!DOCTYPE html>

<html>
```

```html
<head><title>Electronic Health Record</title>
<link rel="stylesheet" type="text/css" href="style.css">
</head>
<body>
<nav>
<a href="registration.html"><button>Registration</button></a>
<a href="appointment.html"><button>Appointment</button></a>
<a href="ehr.html"><button>EHR</button></a>
<a href="billing.html"><button>Billing</button></a>
<a href="inventory.html"><button>Inventory</button></a>
<a href="staff.html"><button>Staff</button></a>
</nav>

<h2>Enter Health Record</h2>
<form action="ehr" method="post">
```

```html
    Patient ID: <input type="text"
name="patientId"><br>

    Diagnosis: <input type="text"
name="diagnosis"><br>

    Treatment: <input type="text"
name="treatment"><br>

<input type="submit" value="Save">

</form>

</body>

</html>
```

## INVENTORYSERVLET.JAVA

```java
package hms;

import javax.servlet.*;

import javax.servlet.http.*;

import java.io.IOException;

import java.sql.*;

public class InventoryServlet extends HttpServlet {
```

```java
    protected void doPost(HttpServletRequest request,
HttpServletResponse response)

        throws ServletException, IOException {

    String itemName =
request.getParameter("itemName");

    String quantity =
request.getParameter("quantity");


    try {

        Class.forName("com.mysql.cj.jdbc.Driver");

        Connection conn =
DriverManager.getConnection("jdbc:mysql://localhost:
3306/hms", "root", "root");

        PreparedStatement ps =
conn.prepareStatement("INSERT INTO
inventory(item_name, quantity) VALUES (?, ?)");

        ps.setString(1, itemName);

        ps.setString(2, quantity);

        ps.executeUpdate();

        conn.close();

    } catch (Exception e) {

        e.printStackTrace();
```

```
        }
        response.sendRedirect("inventory.html");
    }
}
```

## INVENTORY.HTML

```
<!DOCTYPE html>
<html>
<head><title>Inventory</title>
<link rel="stylesheet" type="text/css" href="style.css">
</head>
<body>
<nav>
<a href="registration.html"><button>Registration</button></a>
<a href="appointment.html"><button>Appointment</button></a>
<a href="ehr.html"><button>EHR</button></a>
<a href="billing.html"><button>Billing</button></a>
```

```html
<a href="inventory.html"><button>Inventory</button></a>
<a href="staff.html"><button>Staff</button></a>
</nav>

<h2>Inventory</h2>
<form action="inventory" method="post">
    Item Name: <input type="text" name="itemName"><br>
    Quantity: <input type="text" name="quantity"><br>
<input type="submit" value="Update">
</form>
</body>
</html>
```

## PATIENTREGISTRATIONSERVLET.JAVA

```java
package hms;

import javax.servlet.*;
import javax.servlet.http.*;
```

```java
import java.io.IOException;
import java.sql.*;

public class PatientRegistrationServlet extends HttpServlet {
    protected void doPost(HttpServletRequest request, HttpServletResponse response)
            throws ServletException, IOException {
        String name = request.getParameter("name");
        String dob = request.getParameter("dob");
        String gender = request.getParameter("gender");
        String contact = request.getParameter("contact");

        try {
            Class.forName("com.mysql.cj.jdbc.Driver");
            Connection conn = DriverManager.getConnection("jdbc:mysql://localhost:3306/hms", "root", "root");

            PreparedStatement ps = conn.prepareStatement("INSERT INTO patients(name, dob, gender, contact) VALUES (?, ?, ?, ?)");
            ps.setString(1, name);
```

```
        ps.setString(2, dob);

        ps.setString(3, gender);

        ps.setString(4, contact);

        ps.executeUpdate();

        conn.close();

    } catch (Exception e) {

        e.printStackTrace();

    }

    response.sendRedirect("registration.html");

  }

}
```

## REGISTRATION.HTML

```
<!DOCTYPE html>

<html>

<head><title>Patient Registration</title>

<link rel="stylesheet" type="text/css" href="style.css">

</head>

<body>

<nav>
```

```html
<a href="registration.html"><button>Registration</button></a>
<a href="appointment.html"><button>Appointment</button></a>
<a href="ehr.html"><button>EHR</button></a>
<a href="billing.html"><button>Billing</button></a>
<a href="inventory.html"><button>Inventory</button></a>
<a href="staff.html"><button>Staff</button></a>
</nav>

<h2>Register Patient</h2>
<form action="registerPatient" method="post">
    Name: <input type="text" name="name"><br>
    DOB: <input type="date" name="dob"><br>
    Gender: <select name="gender">
<option>Male</option><option>Female</option><option>Other</option>
</select><br>
```

Contact: <input type=*"text"* name=*"contact"*><br>

<input type=*"submit"* value=*"Register"*>

</form>

</body>

</html>


## STAFFMANAGMENTSERVLET.JAVA

package hms;

import javax.servlet.*;

import javax.servlet.http.*;

import java.io.IOException;

import java.sql.*;

public class StaffManagementServlet extends HttpServlet {

   protected void doPost(HttpServletRequest request, HttpServletResponse response)

       throws ServletException, IOException {

    String name = request.getParameter("name");

    String role = request.getParameter("role");

```java
        String department =
request.getParameter("department");


    try {

        Class.forName("com.mysql.cj.jdbc.Driver");

        Connection conn =
DriverManager.getConnection("jdbc:mysql://localhost:
3306/hms", "root", "root");

        PreparedStatement ps =
conn.prepareStatement("INSERT INTO staff(name, role,
department) VALUES (?, ?, ?)");

        ps.setString(1, name);

        ps.setString(2, role);

        ps.setString(3, department);

        ps.executeUpdate();

        conn.close();
    } catch (Exception e) {

        e.printStackTrace();

    }

    response.sendRedirect("staff.html");

}
```

```
}
```

## STAFF.HTML

```html
<!DOCTYPE html>
<html>
<head><title>Staff Management</title>
<link rel="stylesheet" type="text/css" href="style.css">
</head>
<body>
<nav>
<a href="registration.html"><button>Registration</button></a>
<a href="appointment.html"><button>Appointment</button></a>
<a href="ehr.html"><button>EHR</button></a>
<a href="billing.html"><button>Billing</button></a>
<a href="inventory.html"><button>Inventory</button></a>
<a href="staff.html"><button>Staff</button></a>
```

```
</nav>

<h2>Add Staff</h2>
<form action="staff" method="post">
    Name: <input type="text" name="name"><br>
    Role: <input type="text" name="role"><br>
    Department: <input type="text"
name="department"><br>
<input type="submit" value="Add">
</form>
</body>
</html>
```

**STYLE.CSS**

```css
/* General Layout */
body {
    font-family: Arial,sans-serif;
    background-color: #f4f8fb;
    margin: 0;
    padding: 0;
```

```css
}

/* Page Heading */
h2 {
    background-color: #0066cc;

    color: white;

    padding: 15px;

    margin: 0;

    text-align: center;
}

/* Form Container */
form {
    background-color: white;

    max-width: 600px;

    margin: 30px auto;

    padding: 20px;

    border: 1px solid #ddd;

    border-radius: 8px;

    box-shadow: 0 0 10px rgba(0,0,0,0.1);
```

```css
}

/* Input Fields */
input[type="text"],
input[type="email"],
input[type="number"],
input[type="date"],
textarea,
select {
    width: 100%;
    padding: 10px;
    margin: 10px020px0;
    border: 1pxsolid#ccc;
    border-radius: 4px;
}

/* Submit Button */
button,
input[type="submit"] {
    background-color: #007bff;
```

```css
    color: white;

    padding: 10px16px;

    border: none;

    border-radius: 4px;

    cursor: pointer;

    margin-right: 10px;

}


button:hover,

input[type="submit"]:hover {

    background-color: #0056b3;

}


/* Navigation Bar */

nav {

    background-color: #003366;

    padding: 10px;

    text-align: center;

}
```

```css
nav a {
    text-decoration: none;
    margin: 0 10px;
}


nav button {
    background-color: #005aab;
    color: white;
    padding: 8px 12px;
    border: none;
    border-radius: 5px;
}


nav button:hover {
    background-color: #003f7d;
}


/* Table Style (optional for EHR or Inventory view) */
table {
    border-collapse: collapse;
```

```css
    width: 100%;

    margin-top: 20px;

}


tableth,tabletd {

    text-align: left;

    padding: 12px;

    border-bottom: 1pxsolid#ccc;

}

tableth {

    background-color: #0066cc;

    color: white;

}
```

## WEB.XML

```xml
<?xml version="1.0" encoding="UTF-8"?>
<web-app xmlns="http://xmlns.jcp.org/xml/ns/javaee"

xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
```

```
xsi:schemaLocation="http://xmlns.jcp.org/xml/ns/java
ee

http://xmlns.jcp.org/xml/ns/javaee/web-app_3_1.xsd"
    version="3.1">

<!-- Patient Registration Servlet -->
<servlet>
<servlet-name>PatientRegistrationServlet</servlet-
name>
<servlet-class>hms.PatientRegistrationServlet</servlet-
class>
</servlet>
<servlet-mapping>
<servlet-name>PatientRegistrationServlet</servlet-
name>
<url-pattern>/registerPatient</url-pattern>
</servlet-mapping>

<!-- Appointment Servlet -->
<servlet>
```

```xml
<servlet-name>AppointmentServlet</servlet-name>
<servlet-class>hms.AppointmentServlet</servlet-class>
</servlet>
<servlet-mapping>
<servlet-name>AppointmentServlet</servlet-name>
<url-pattern>/scheduleAppointment</url-pattern>
</servlet-mapping>

<!-- EHR Servlet -->
<servlet>
<servlet-name>EHRServlet</servlet-name>
<servlet-class>hms.EHRServlet</servlet-class>
</servlet>
<servlet-mapping>
<servlet-name>EHRServlet</servlet-name>
<url-pattern>/ehr</url-pattern>
</servlet-mapping>

<!-- Billing Servlet -->
<servlet>
```

```xml
<servlet-name>BillingServlet</servlet-name>
<servlet-class>hms.BillingServlet</servlet-class>
</servlet>
<servlet-mapping>
<servlet-name>BillingServlet</servlet-name>
<url-pattern>/billing</url-pattern>
</servlet-mapping>

<!-- Inventory Servlet -->
<servlet>
<servlet-name>InventoryServlet</servlet-name>
<servlet-class>hms.InventoryServlet</servlet-class>
</servlet>
<servlet-mapping>
<servlet-name>InventoryServlet</servlet-name>
<url-pattern>/inventory</url-pattern>
</servlet-mapping>

<!-- Staff Management Servlet -->
<servlet>
```

```xml
<servlet-name>StaffManagementServlet</servlet-name>

<servlet-class>hms.StaffManagementServlet</servlet-class>

</servlet>

<servlet-mapping>

<servlet-name>StaffManagementServlet</servlet-name>

<url-pattern>/staff</url-pattern>

</servlet-mapping>


<!-- Welcome File -->

<welcome-file-list>

<welcome-file>registration.html</welcome-file>

</welcome-file-list>


</web-app>
```

## CODE FOR DATABASE

```sql
CREATE DATABASE IF NOT EXISTS hms;
```

```sql
USE hms;

-- Patients Table
CREATE TABLE IF NOT EXISTS patients (
    patient_id INT AUTO_INCREMENT PRIMARY KEY,
    name VARCHAR(100) NOT NULL,
    dob DATE,
    gender VARCHAR(10),
    contact VARCHAR(15),
    registration_date TIMESTAMP DEFAULT CURRENT_TIMESTAMP
);

-- Appointments Table
CREATE TABLE IF NOT EXISTS appointments (
    appointment_id INT AUTO_INCREMENT PRIMARY KEY,
    patient_id INT,
    doctor_name VARCHAR(100),
    appointment_date DATE,
    appointment_time TIME,
```
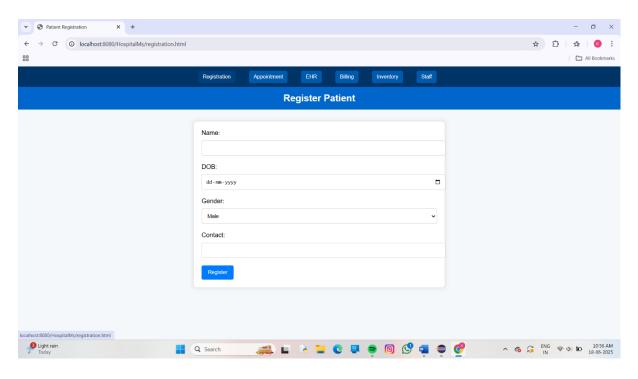
```sql
    FOREIGN KEY (patient_id) REFERENCES
patients(patient_id)
);


-- EHR (Electronic Health Records)
CREATE TABLE IF NOT EXISTS ehr (
    ehr_id INT AUTO_INCREMENT PRIMARY KEY,
    patient_id INT,
    diagnosis TEXT,
    treatment TEXT,
    record_date TIMESTAMP DEFAULT
CURRENT_TIMESTAMP,
    FOREIGN KEY (patient_id) REFERENCES
patients(patient_id)
);


--  Billing Table
CREATE TABLE IF NOT EXISTS billing (
    bill_id INT AUTO_INCREMENT PRIMARY KEY,
    patient_id INT,
    service VARCHAR(100),
```

```sql
    amount DECIMAL(10,2),

    bill_date TIMESTAMP DEFAULT
CURRENT_TIMESTAMP,

    FOREIGN KEY (patient_id) REFERENCES
patients(patient_id)

);


-- Inventory Table

CREATE TABLE IF NOT EXISTS inventory (

    item_id INT AUTO_INCREMENT PRIMARY KEY,

    item_name VARCHAR(100),

    quantity INT,

    updated_at TIMESTAMP DEFAULT
CURRENT_TIMESTAMP

);


-- Staff Table

CREATE TABLE IF NOT EXISTS staff (

    staff_id INT AUTO_INCREMENT PRIMARY KEY,

    name VARCHAR(100),

    role VARCHAR(50),
```

```
    department VARCHAR(100),
    hire_date TIMESTAMP DEFAULT
CURRENT_TIMESTAMP
);
```

# OUTPUT

## REGISTRATION PAGE
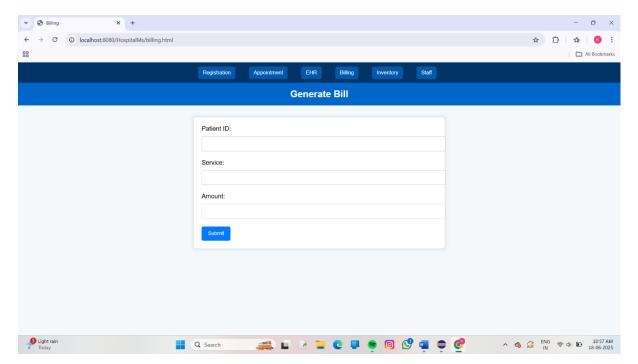


## APPOINTMENT PAGE
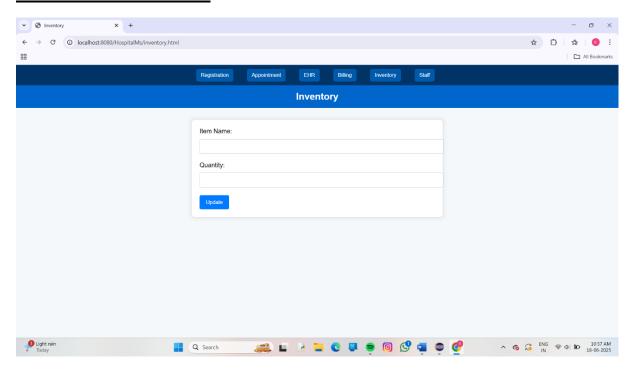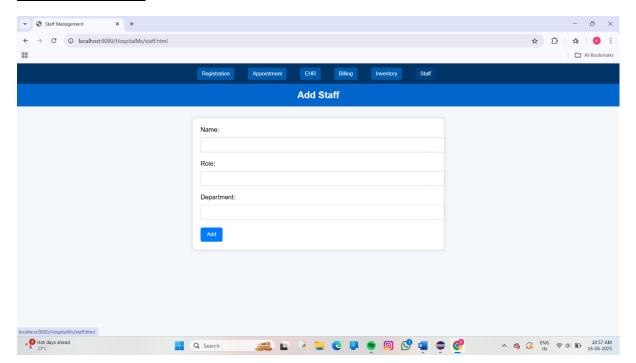
# EHR PAGE



# BILLING PAGE

# INVENTORY PAGE



# STAFF PAGE

# DATABASE

LET US CONSIDER SOMEONE IS BILLING IN THE BILLING PAGE AND IT IS RECORDERED IN THE DATABASE